



Low-Cost, Environmentally Friendly Fire Suppression – Technology Opportunity

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Overview

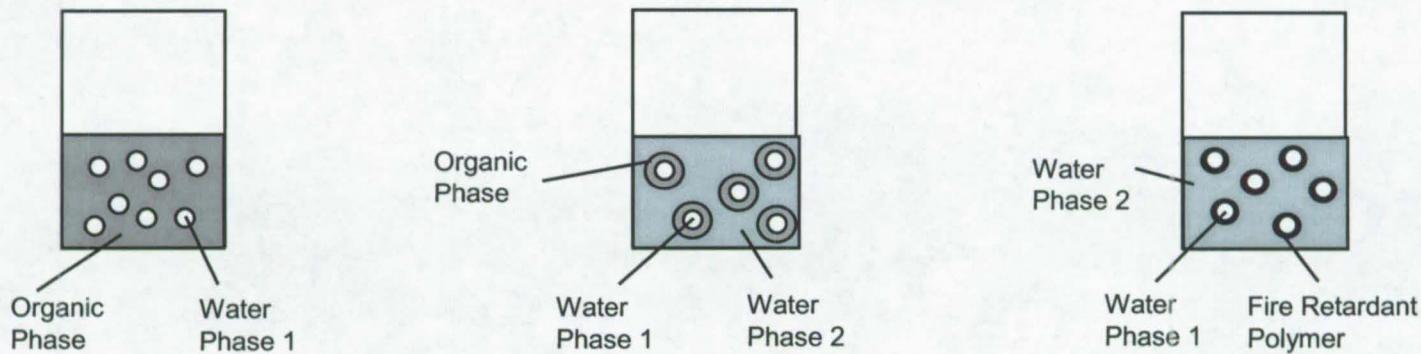
- Extinguishing Concept
- Methods Used to Prepare Agent
 - In-liquid Drying
 - Interfacial polymerization
 - Complex Coacervation
- Products
- Moisture Stability
- Performance



Extinguishing Concept

- Effects of Water
 - Energy Extraction
 - Oxygen Displacement
- Halons
 - Inhibition of Combustion Process
 - Oxygen Displacement
- Environmental Effects
 - Global Warming
 - Ozone Depletion
- Toxicity

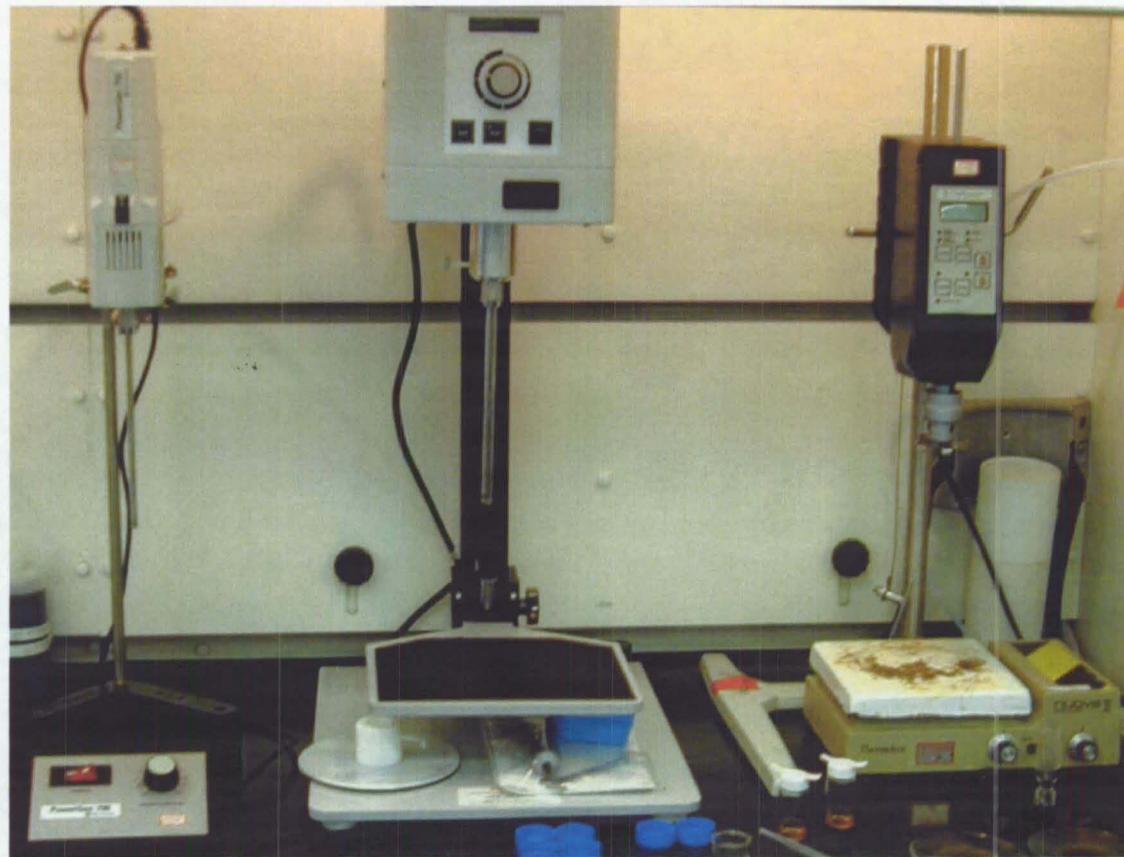
In-liquid Drying



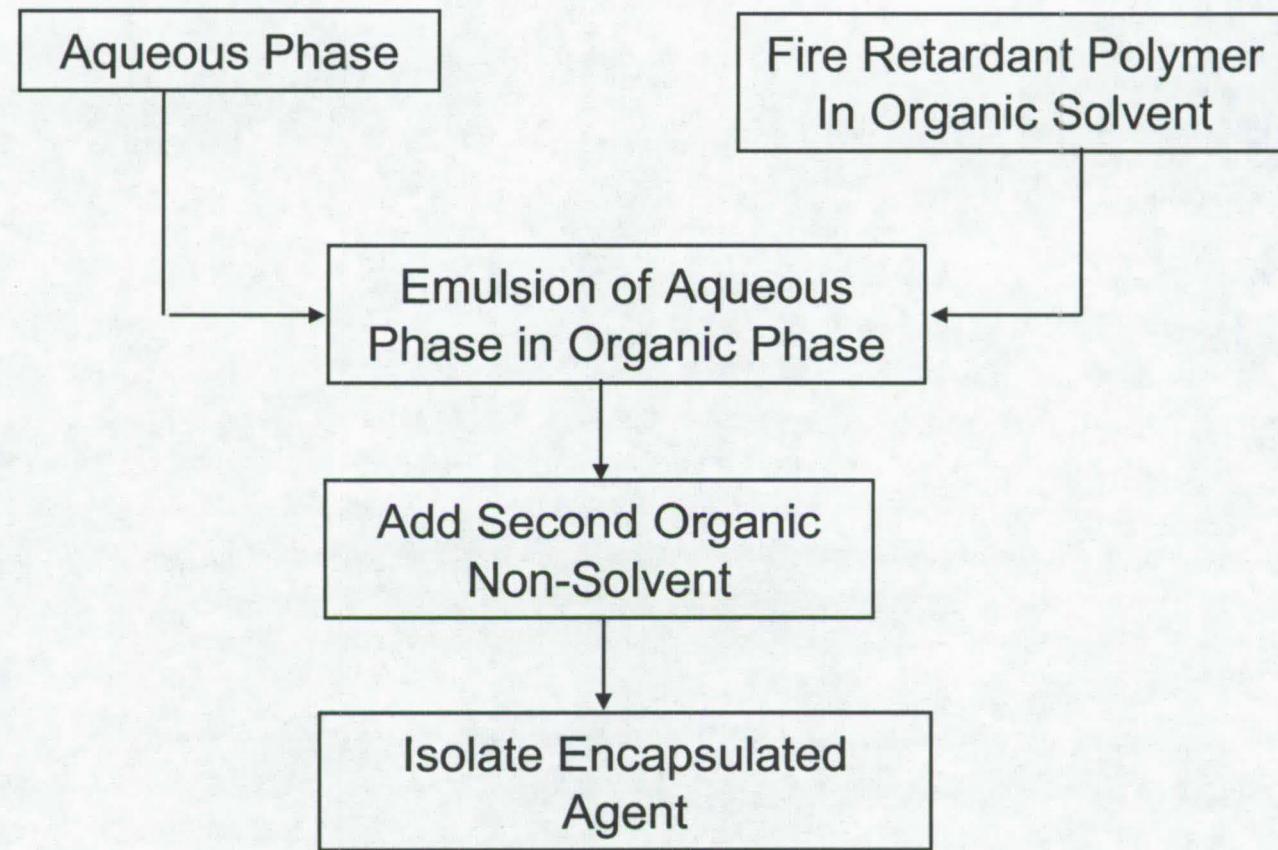
- Water Phase 1 – Encapsulated Water Solution
- Organic Phase – Fire Retardant Polymer in Organic Solvent
- Water Phase 2 – Gelling Agent in Water



Homogenizers

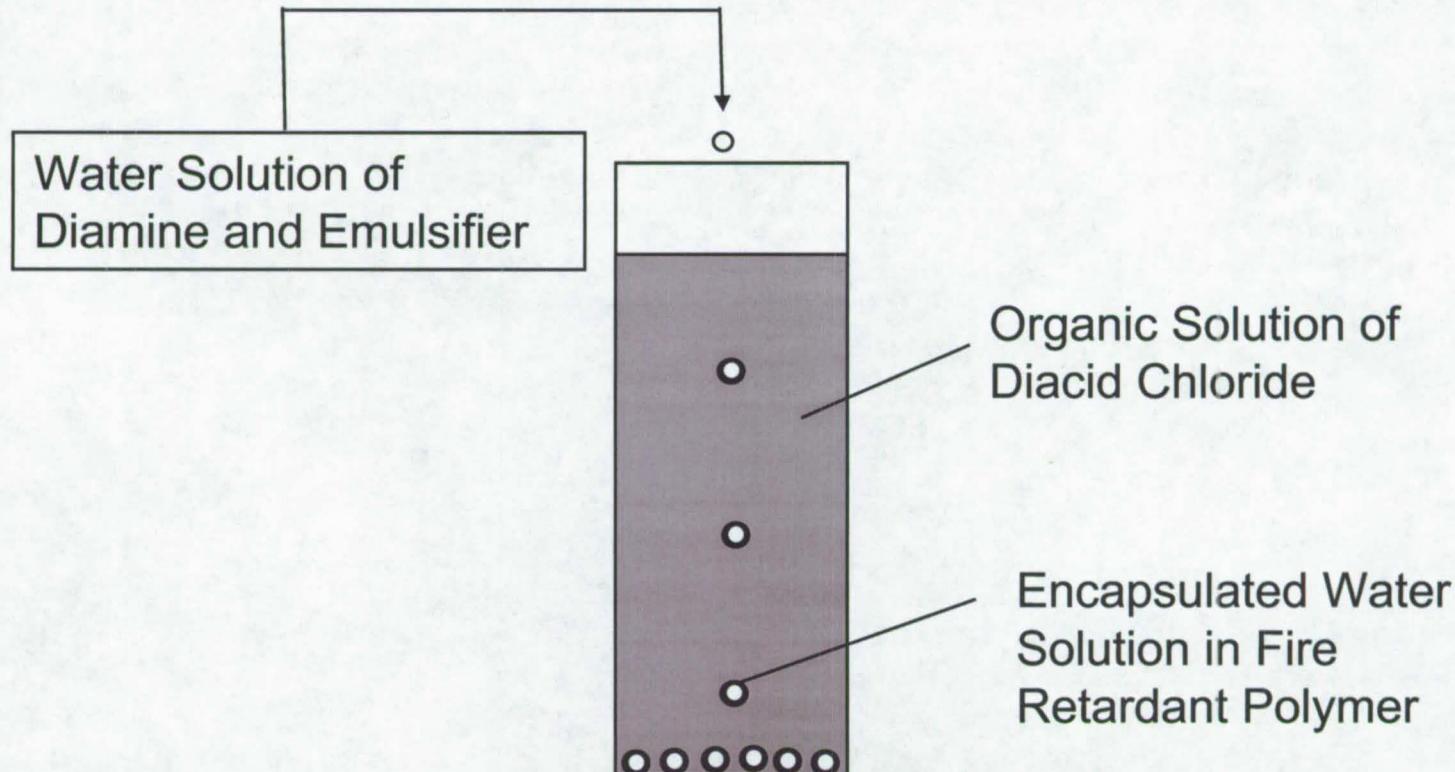


Selective Polymer Solubility

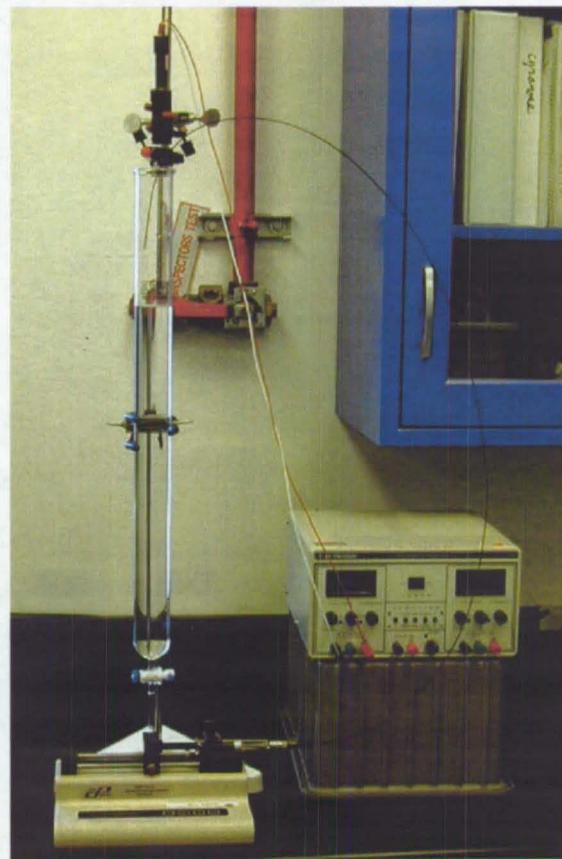




Interfacial Polymerization

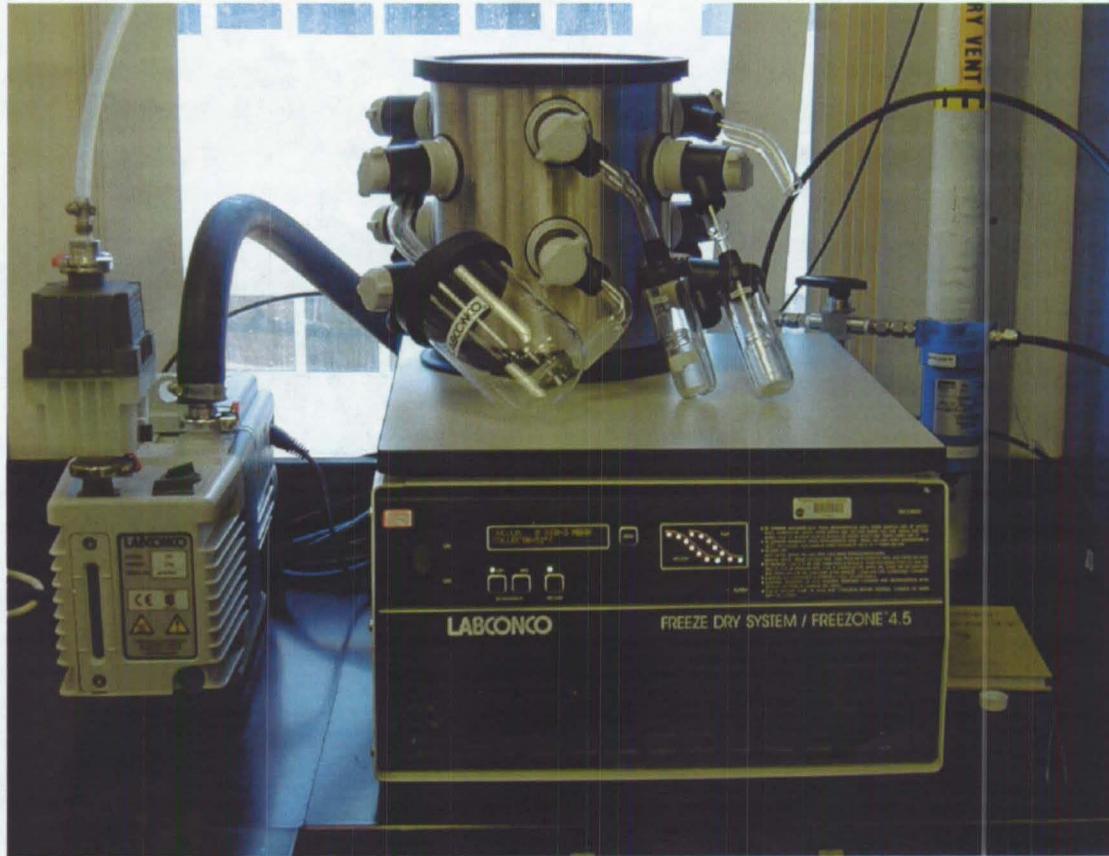


Interfacial Polymerization Drop Method

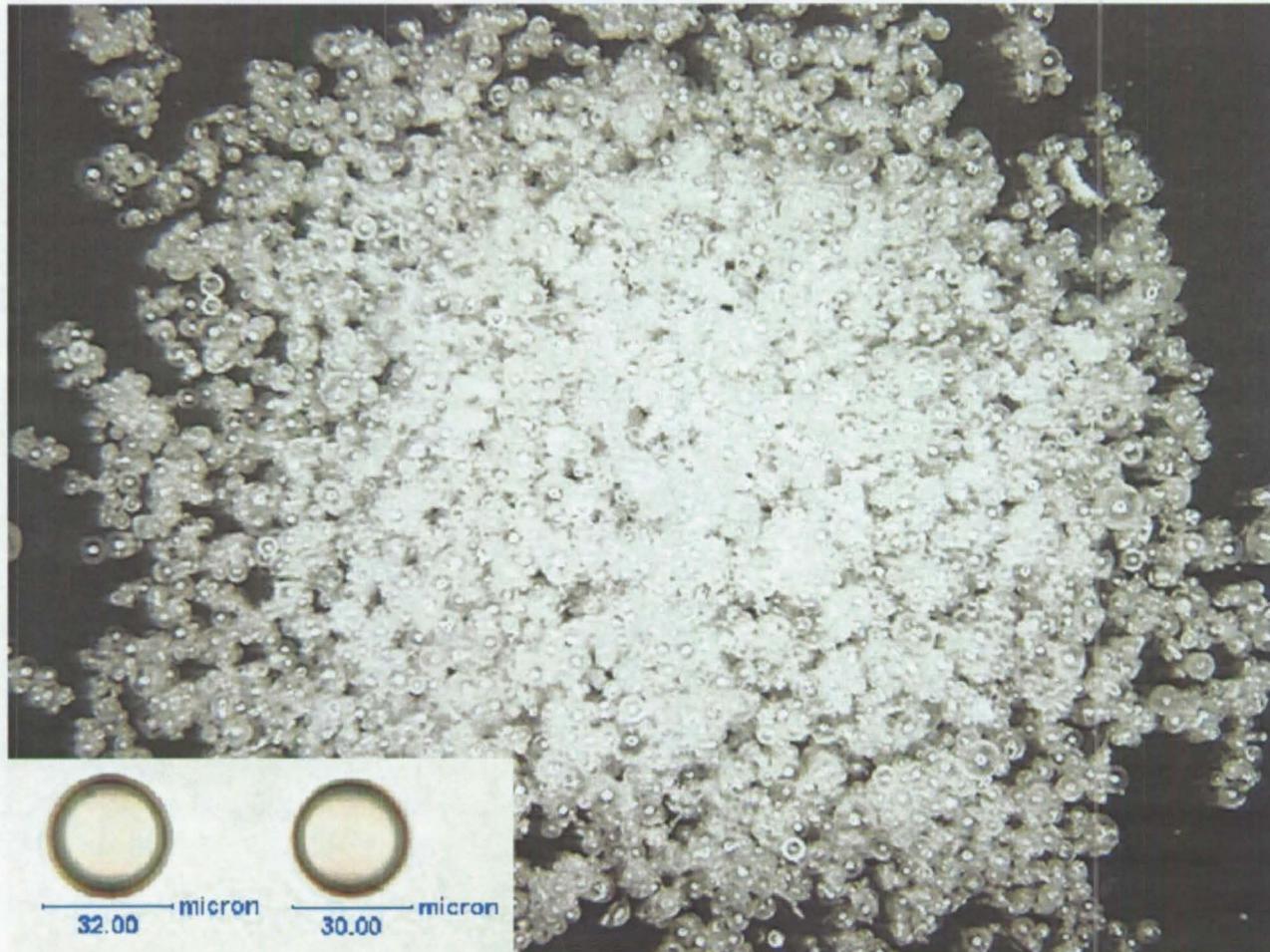




Freeze Drier



Collection of Agent Microspheres

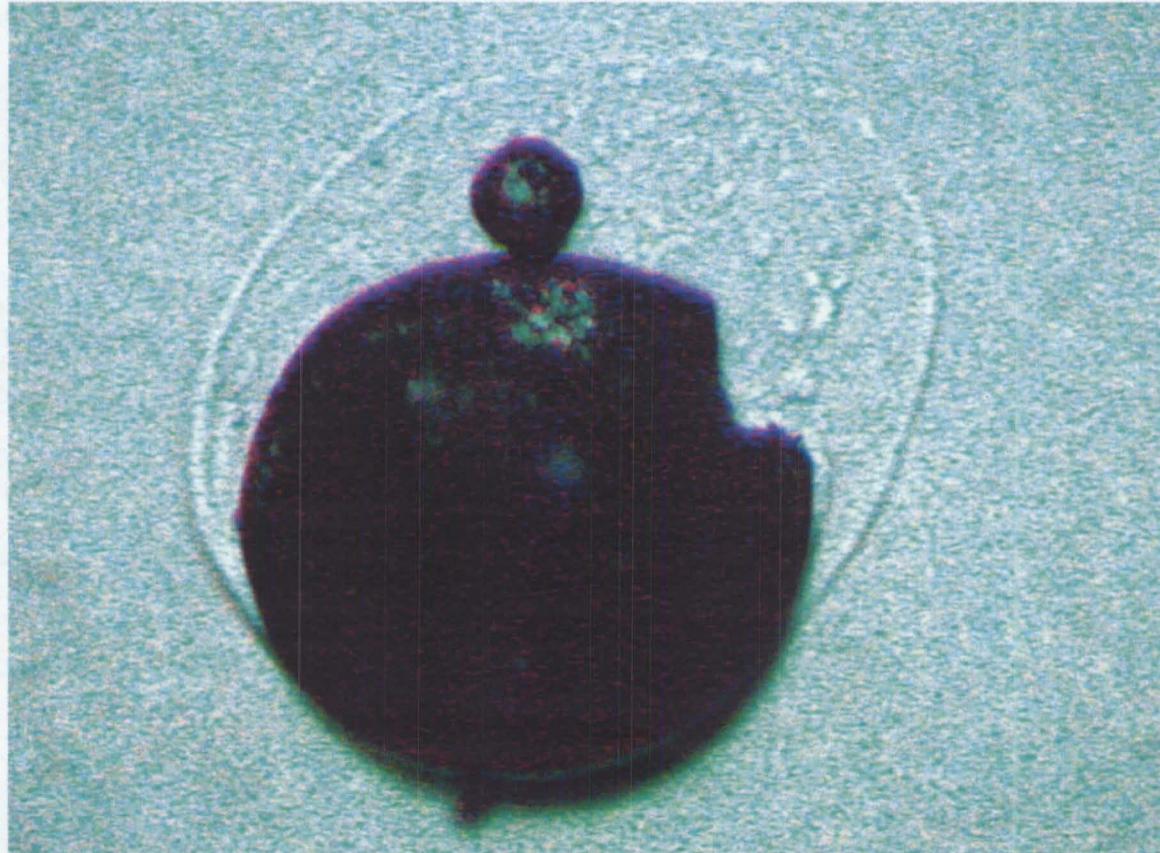


Sonic Sieve

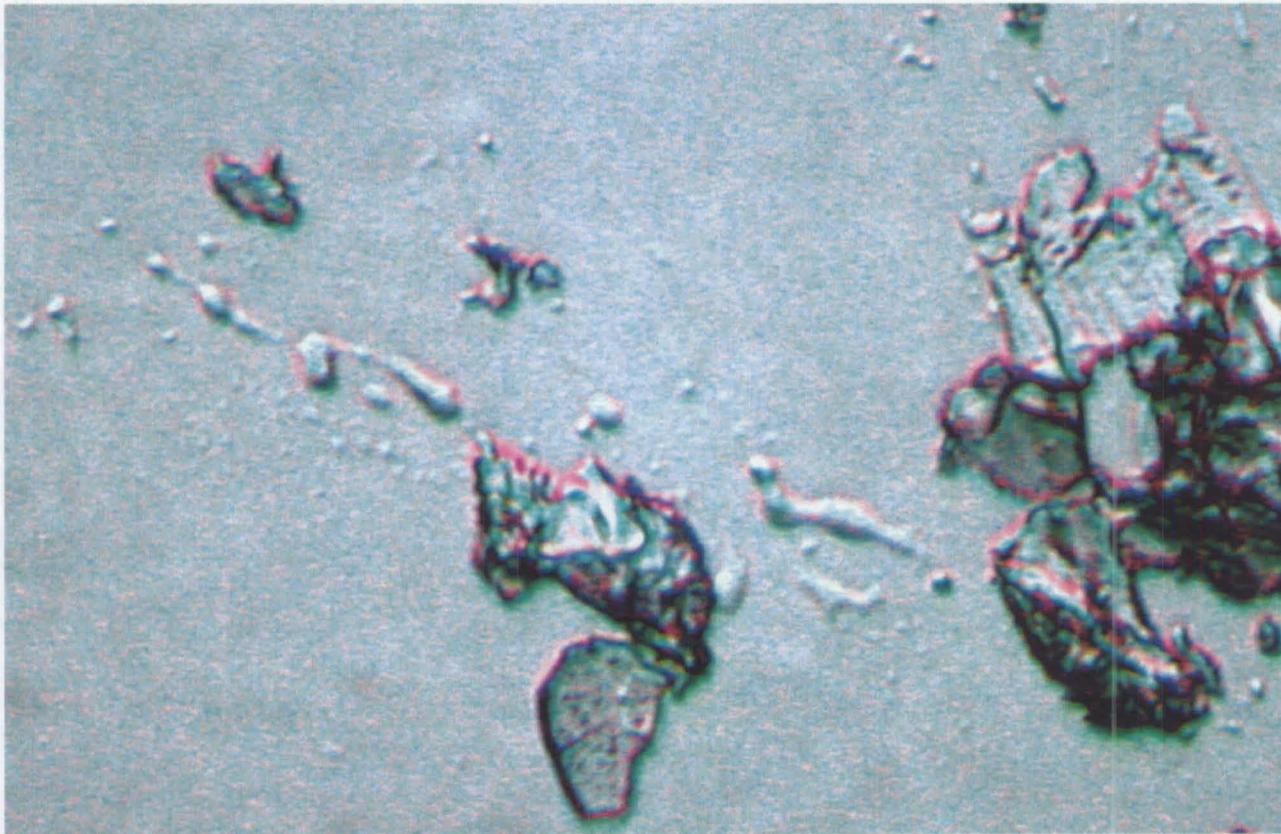




Broken Microsphere with Water



Crushed Capsule Time of Preparation



Crushed Capsule After 1 yr





Preliminary Performance Data

